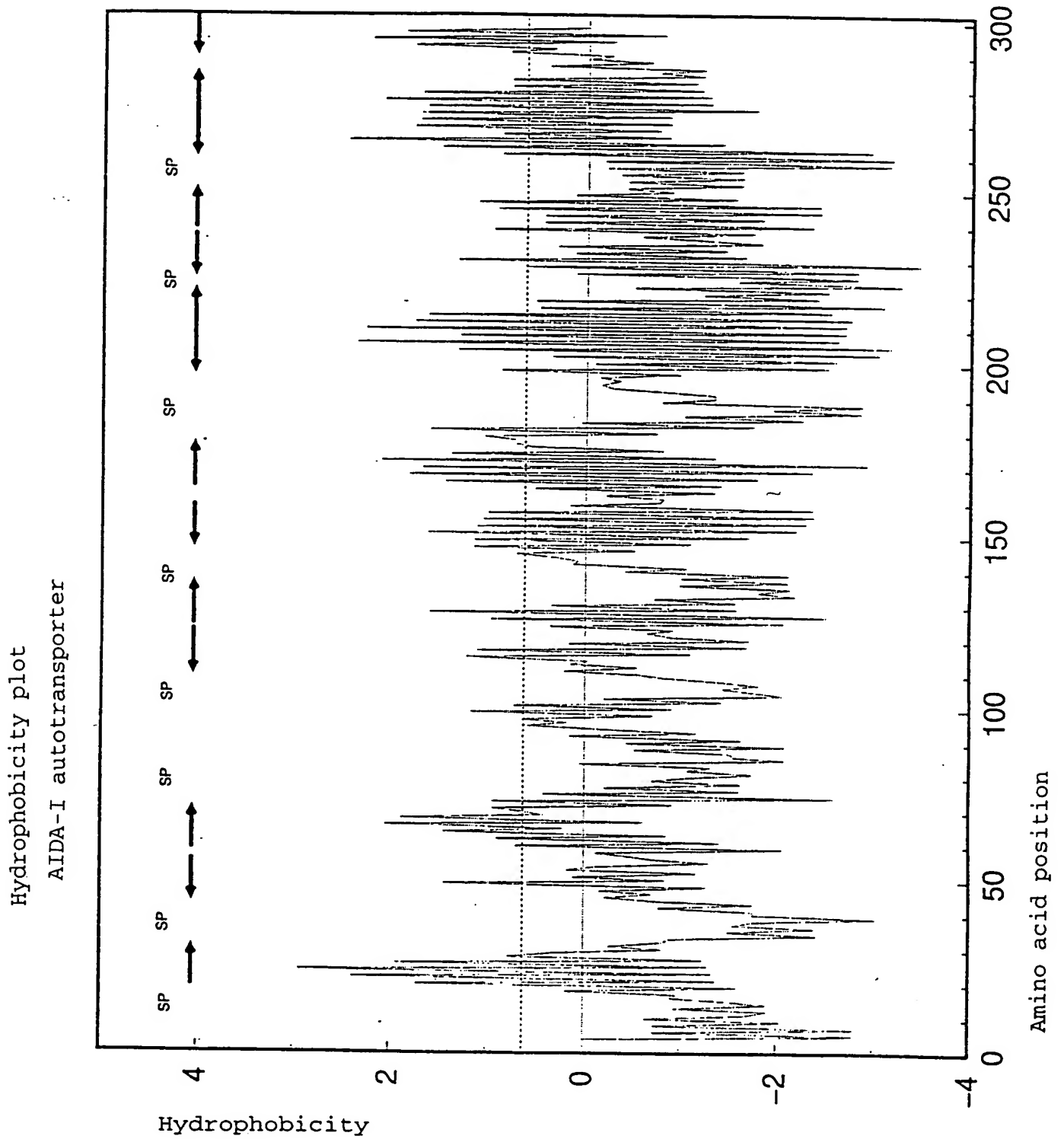


Figure 1



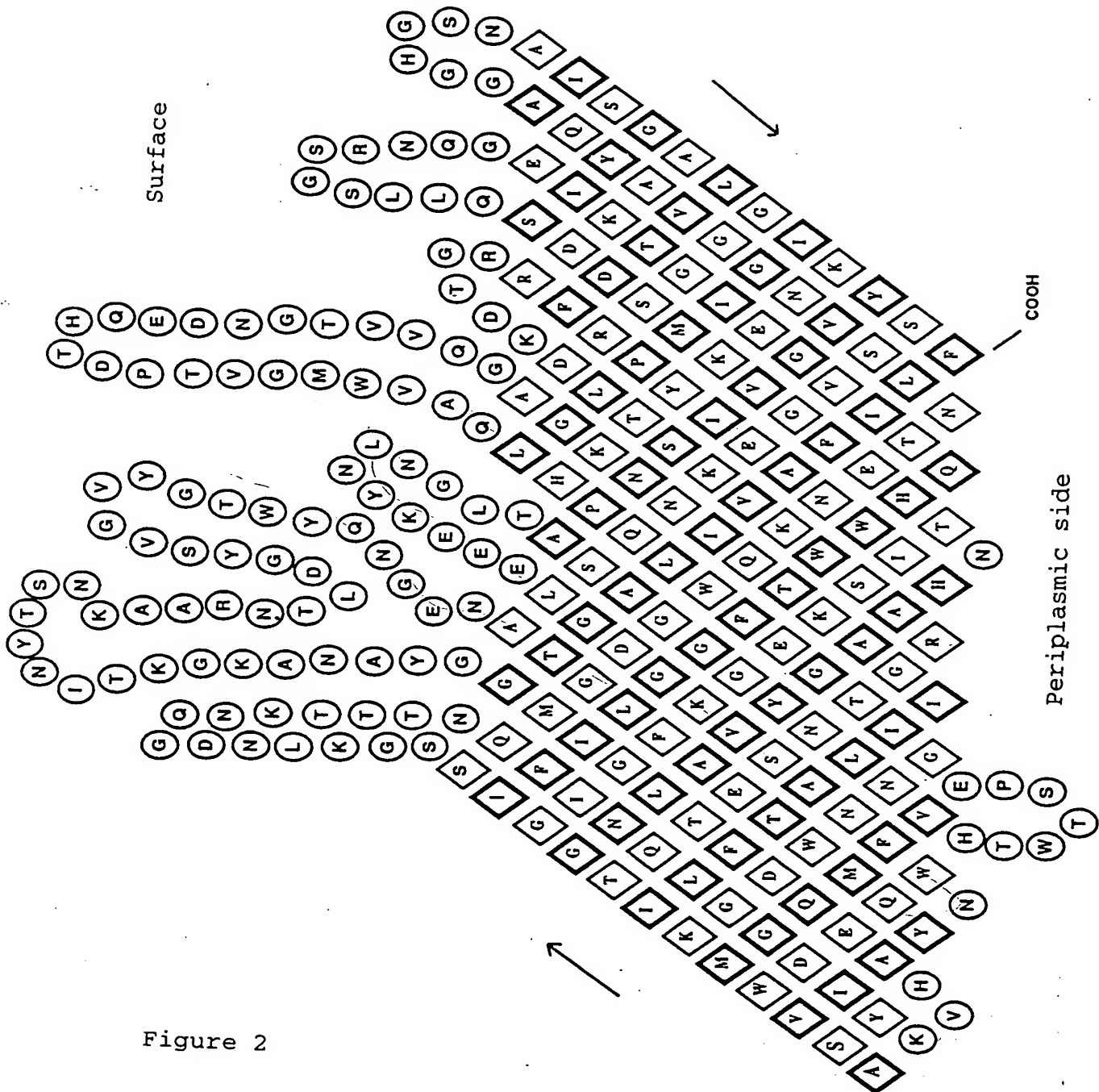


Figure 2

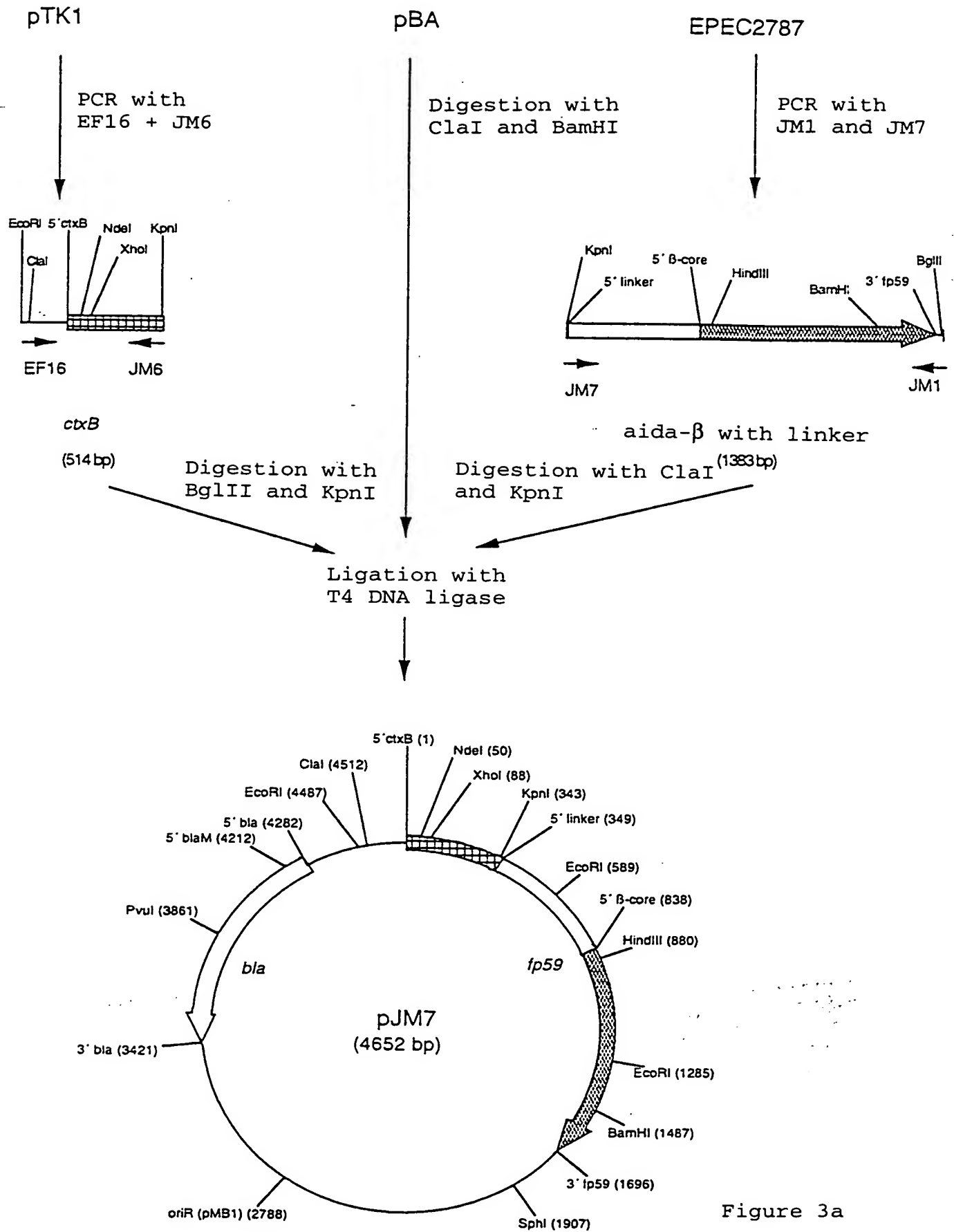


Figure 3a

09/147036

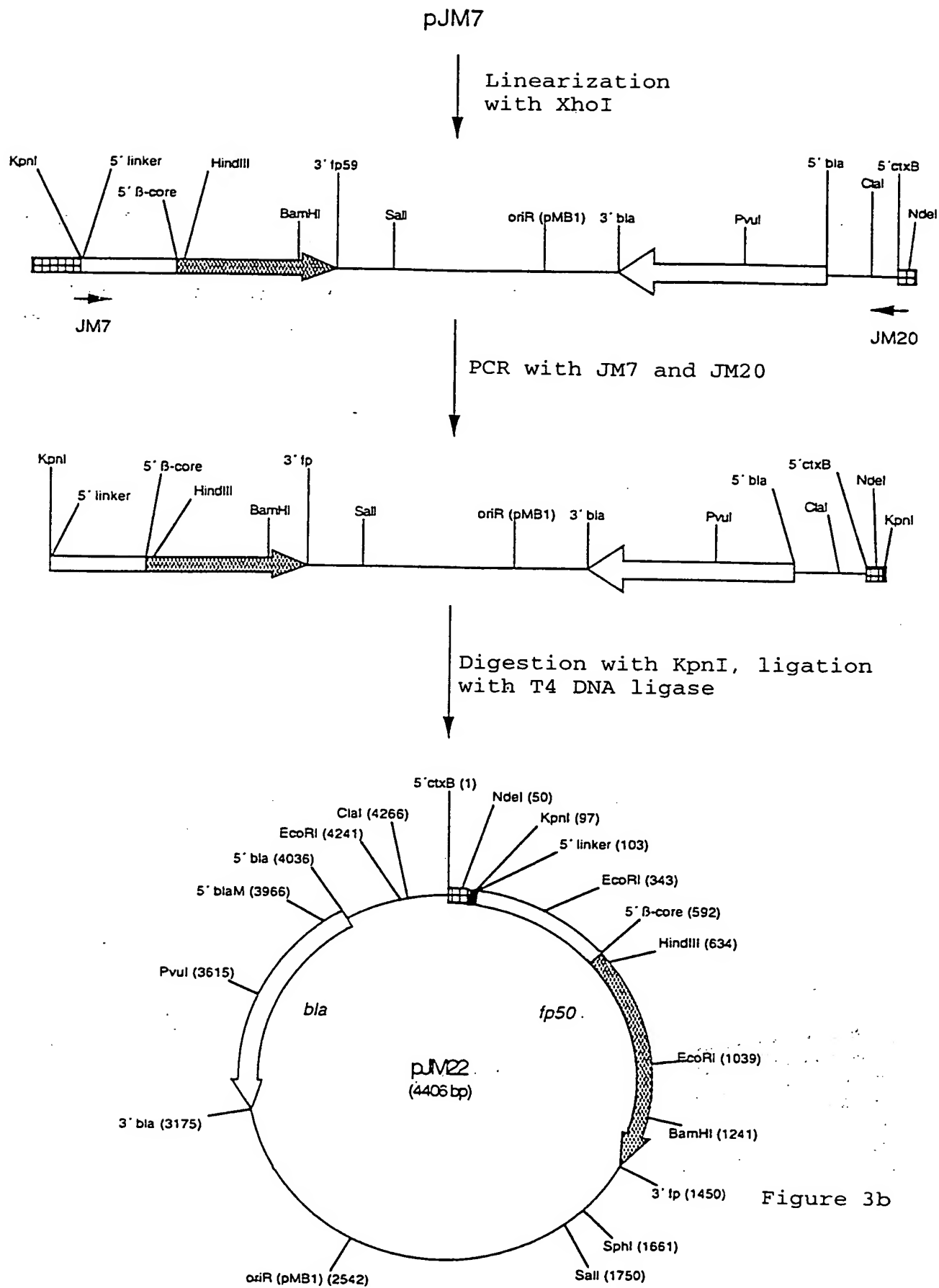


Figure 4a

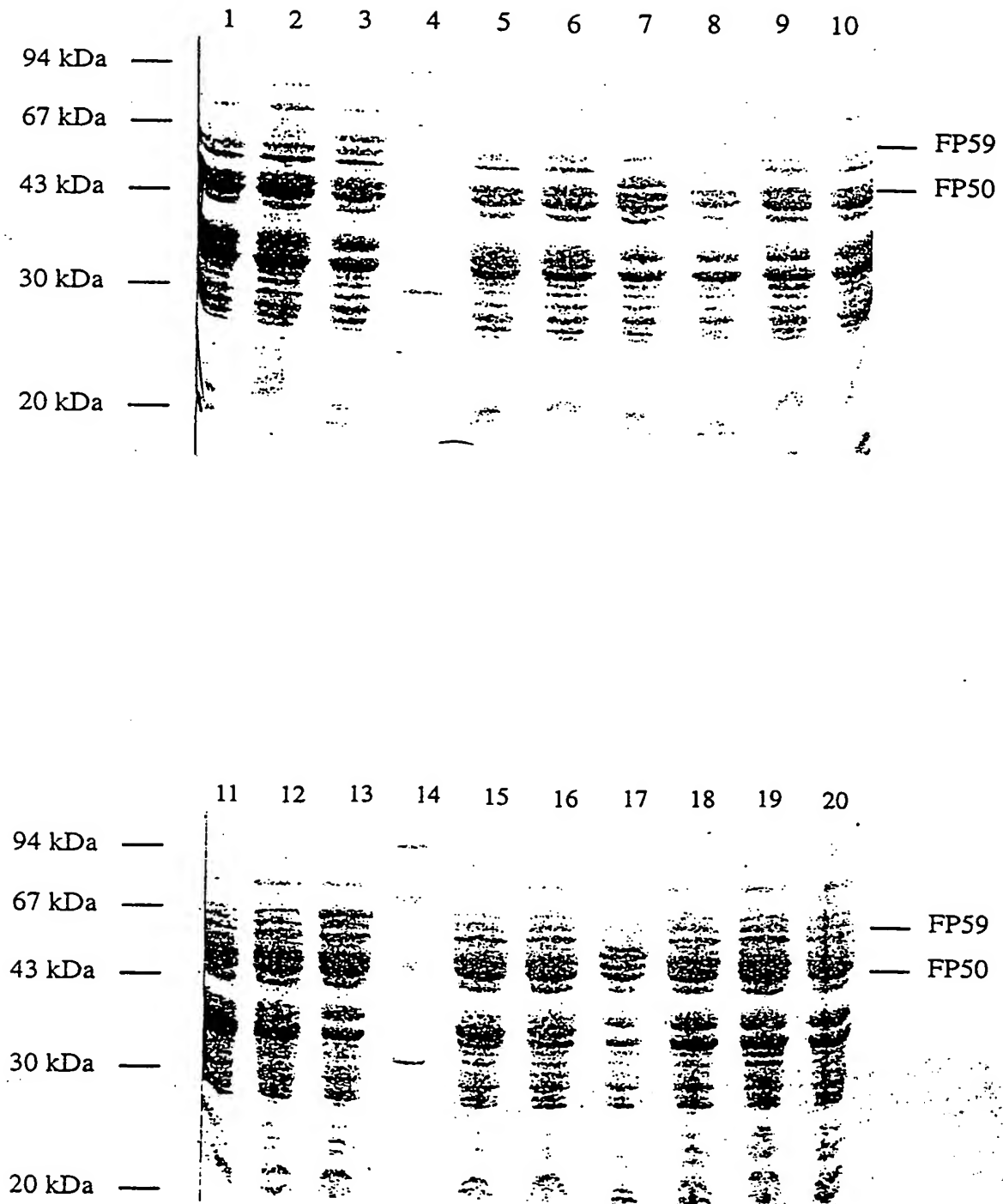


Figure 4b

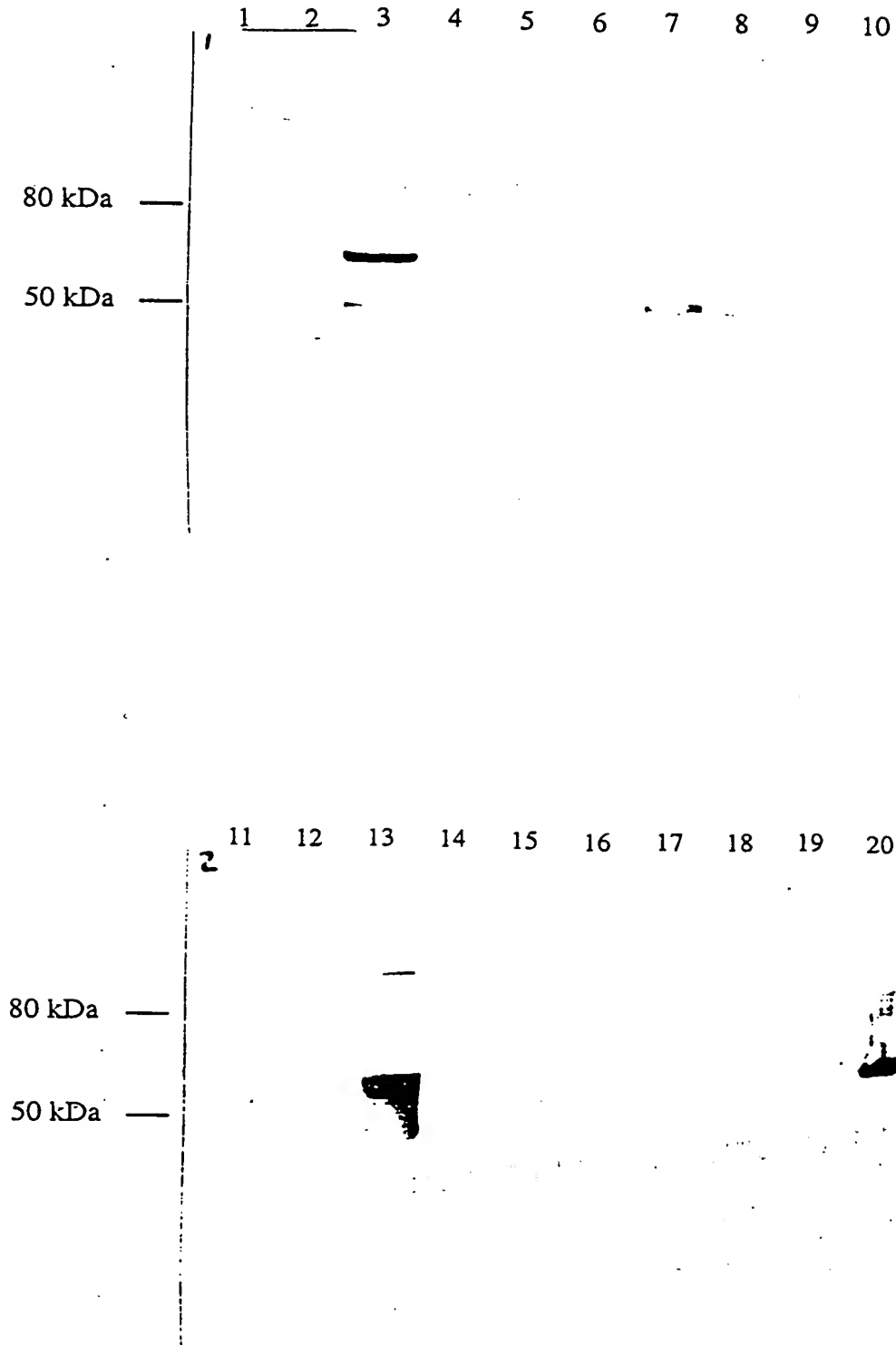
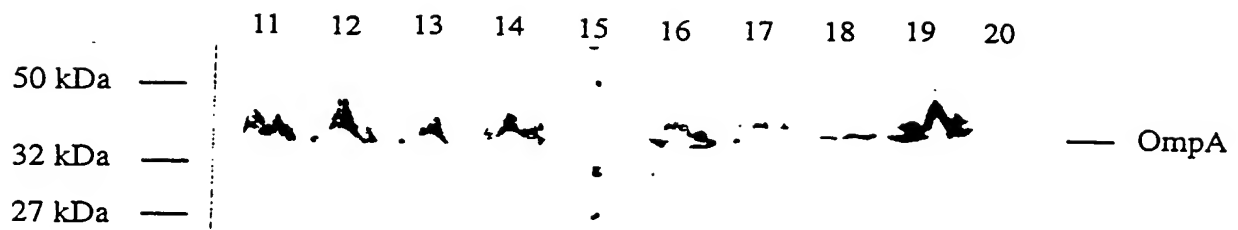
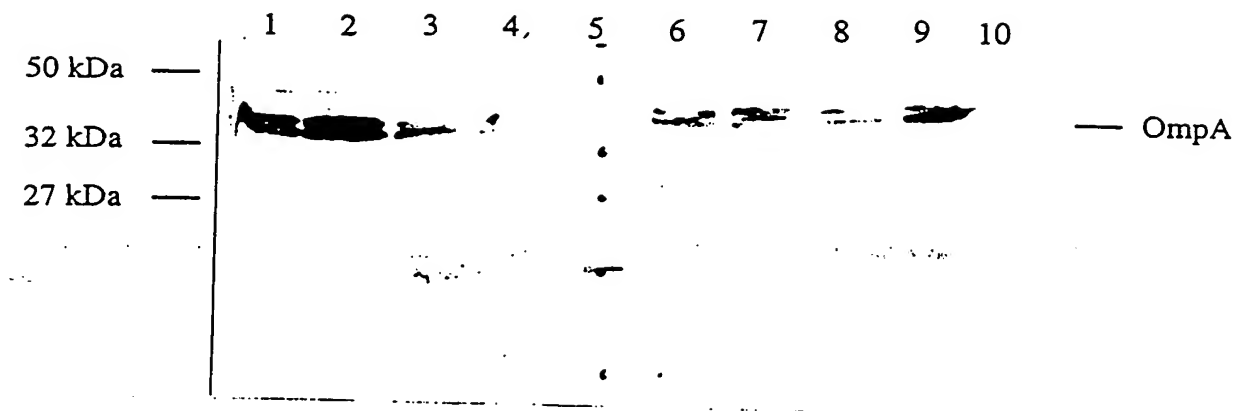
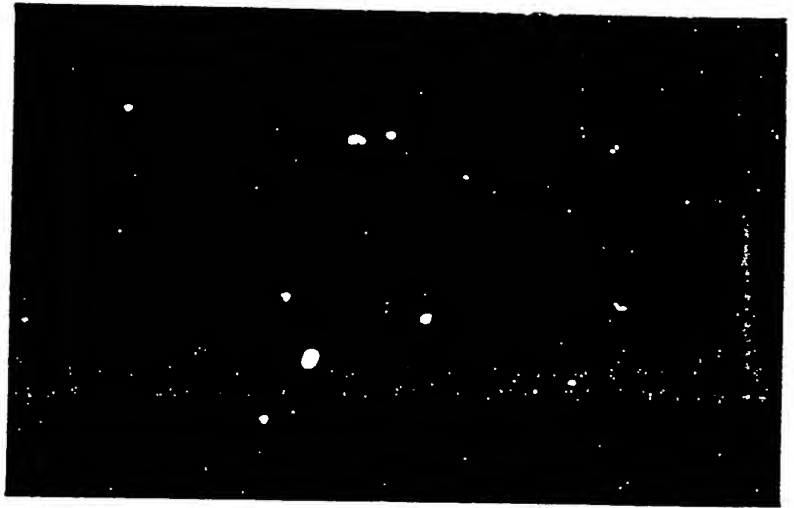
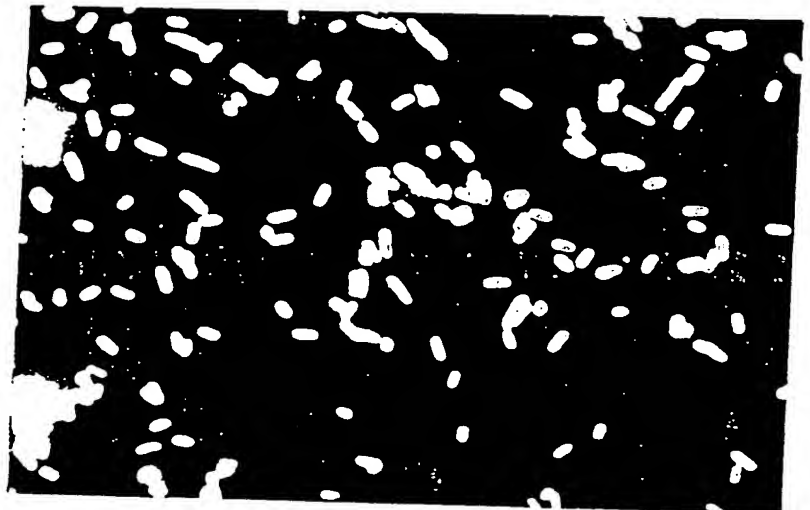


Figure 4c



09/147036-121598

Figure 5

a) *E.coli* UT5600 pBAb) *E.coli* UT5600 pTK1c) *E.coli* UT5600 pJM7

09/147036-12599

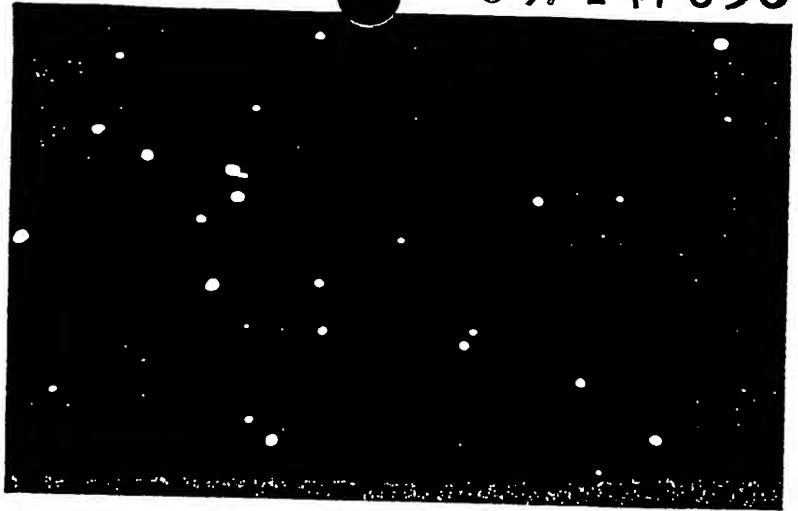


9/28

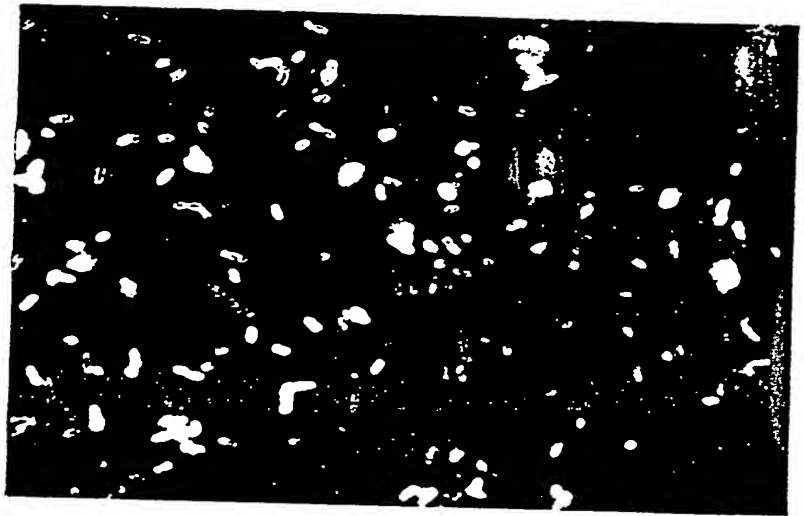
09/147036

Figure 5

d) *E.coli* UT5600 pJM22



e) *E.coli* UT5600 pTK61



09/147036 121598

10/28

Figure 6

DNA sequences of the oligonucleotides used

Name	Use 1)	Length (bp)	Sequence (5'-3')
EF16	PCR (+)	36	TGTAAAACGACGGCCAGTATCACGAGG CCCTTTCGT
JM1	PCR (-)	27	GGAAGATCTGCCTCAGAAATGAGGGCC
JM6	PCR (-)	30	CATGGTACCAGGCGTTTTATTATTCCT AC
JM7	PCR (+)	30	CGGGGTACCCTTAATCCTACAAAAGAA AGT
JM20	PCR (+)	44	AAGGGTACCTTTGAAATACTCCGGAGTA ATATTTTTGAGGTGTTTC

1)

(+) and (-) relate to the coding (+) and the DNA strand complementary thereto (-).

09/147036

Figure 7

GCATCCGTGTGGATGAAGATCACTGGAGGAATAAGCTCTGGTAAGCTTAATGACGGGCAA  
1 -----+-----+-----+-----+-----+ 60  
A S V W M K I T G G I S S G K L N D G Q -  
AATAAAACAACAACCAATCAGTTTATCAATCAGCTCGGGGGGATATTTATAAATTCCAT  
61 -----+-----+-----+-----+-----+ 120  
N K T T T N Q F I N Q L G G D I Y K F H -  
GCTGAACAACCTGGGTGATTTTACCTTAGGGATTATGGGAGGATACGCGAATGCAAAAGGT  
121 -----+-----+-----+-----+-----+ 180  
A E Q L G D F T L G I M G G Y A N A K G -  
AAAACGATAAATTACACGAGCAACAAAGCTGCCAGAAACACACTGGATGGTTATTCTGTCTC  
181 -----+-----+-----+-----+-----+ 240  
K T I N Y T S N K A A R N T L D G Y S V -  
GGGGTATACGGTACGTGGTATCAGAATGGGGAAAATGCAACAGGGCTCTTTGCTGAAACT  
241 -----+-----+-----+-----+-----+ 300  
G V Y G T W Y Q N G E N A T G L F A E T -  
TGGATGCAATATAACTGGTTTAATGCATCAGTGAAAGGTGACGGACTGGAAGAAGAAAAA  
301 -----+-----+-----+-----+-----+ 360  
W M Q Y N W F N A S V K G D G L E E E K -  
TATAATCTGAATGGTTTAACCGCTTCTGCAGGTGGGGGATATAACCTGAATGTGCACACA  
361 -----+-----+-----+-----+-----+ 420  
Y N L N G L T A S A G G G Y N L N V H T -  
TGGACATCACCTGAAGGAATAACAGGTGAATTCTGGTTACAGCCTCATTTCAGGCTGTC  
421 -----+-----+-----+-----+-----+ 480  
W T S P E G I T G E F W L Q P H L Q A V -  
TGGATGGGGGTTACACCGGATACACATCAGGAGGATAACGGAACGGTGGTGCAGGGAGCA  
481 -----+-----+-----+-----+-----+ 540  
W M G V T P D T H Q E D N G T V V Q G A -  
GGGAAAAATAATATTCAGACAAAAGCAGGTATTCGTGCATCCTGGAAGGTGAAAAGCACC  
541 -----+-----+-----+-----+-----+ 600  
G K N N I Q T K A G I R A S W K V K S T -  
CTGGATAAGGATACCGGGCGGAGGTTCCGTCCGTATATAGAGGCAAACCTGGATCCATAAC  
601 -----+-----+-----+-----+-----+ 660  
L D K D T G R R F R P Y I E A N W I H N -  
ACTCATGAATTTGGTGTAAATGAGTGATGACAGCCAGTTGTTGTCAGGTAGCCGAAAT  
661 -----+-----+-----+-----+-----+ 720  
T H E F G V K M S D D S Q L L S G S R N -  
CAGGGAGAGATAAAGACAGGTATTGAAGGGGTGATTACTCAAACTTGTCAGTGAATGGC  
721 -----+-----+-----+-----+-----+ 780  
Q G E I K T G I E G V I T Q N L S V N G -  
GGAGTCGCATATCAGGCAGGAGGTACGGGAGCAATGCCATCTCCGGAGCACTGGGGATA  
781 -----+-----+-----+-----+-----+ 840  
G V A Y Q A G G H G S N A I S G A L G I -  
AAATACAGCTTC  
841 -----+----- 852  
K Y S F -

09147036-121598

Figure 8

CTGCGCCTGCGCGCCGACGCCGGCGGGCCATGGGCGCGTACGTTTCAGCGAGCGCCAGCAG  
 1 L R L R A D A G G P W A R T F S E R Q Q 60  
 ATCAGCAACCGCCACGCCCCGCGCTACGACCAGACGGTCAGCGGGCTGGAGATCGGCCTG  
 61 I S N R H A R A Y D Q T V S G L E I G L 120  
 GACCGTGGCTGGAGCGCGTCGGGCGGGCGCTGGTACGCCGGCGGCCTGCTCGGCTACACC  
 121 D R G W S A S G G R W Y A G G L L G Y T 180  
 TATGCCGACCGCACCTATCCCGGCGACGGTGGCGGCAAGGTCAAGGGCCTGCACGTCCGGC  
 181 Y A D R T Y P G D G G G K V K G L H V G 240  
 GGCTACGCCGCCTATGTCGGCGATGGCGGCTACTATCTCGACACCGTGTGCGGCTGGGG  
 241 G Y A A Y V G D G G Y Y L D T V L R L G 300  
 CGCTACGATCAGCAATACAACATTGCCGGCACCGATGGCGGCCGCGTCAACGCCGACTAC  
 301 R Y D Q Q Y N I A G T D G G R V T A D Y 360  
 CGCACAAAGCGGCGCCGCATGGTCGCTCGAAGGCGGGCGCCGGTTCGAGCTGCCCAACGAC  
 361 R T S G A A W S L E G G R R F E L P N D 420  
 TGGTTCGCCGAACCGCAGGCCGAGGTCATGCTGTGGCGCACGTCAGGCAAGCGCTATCGC  
 421 W F A E P Q A E V M L W R T S G K R Y R 480  
 GCCAGCAATGGCCTGCGCGTCAAGGTGGACGCCAACACCGCCACGCTGGGCGCGCTGGGC  
 481 A S N G L R V K V D A N T A T L G R L G 540  
 TTGCGCTTCGGCCGCGCATCGCCCTGGCCGGCGGCAACATCGTGCAGCCCTACGCCAGG  
 541 L R F G R R I A L A G G N I V Q P Y A R 600  
 CTCGGCTGGACGCAGGAGTTCAAAAGCACGGGCGATGTGCGCACCAATGGCATTGGCCAT  
 601 L G W T Q E F K S T G D V R T N G I G H 660  
 GCCGGCGCAGGCCGCCACGGCCGCGTGAAGTGGGCGCGGGCGTGCACGCCGCGTTGGGC  
 661 A G A G R H G R V E L G A G V D A A L G 720  
 AAGGGGCACAACCTCTATGCTTCGTACGAGTACGCGGCGGGCGACCGGATCAACATTCCG  
 721 K G H N L Y A S Y E Y A A G D R I N I P 780  
 TGGTCGTTCCACGCCGGCTACCGCTACAGCTTC  
 781 W S F H A G Y R Y S F 813

Figure 9

[illegible]

Figure 10

ACCTCAATCTACACCACAGTACAGGCAGGATGGGATCATGTATTGGCAGCGAGGGTGGGA  
 1 -----+-----+-----+-----+-----+ 60  
 T S I Y T T V Q A G W D H V F G S E G G -  
 AATGACTTTTGTAGGTTTGGCTGTGGCTTATGCAGGTGCAGCGATGAGCTCTGAGAAGAAA  
 61 -----+-----+-----+-----+-----+ 120  
 N D F L G F A V A Y A G A A M S S E K K -  
 GAACAGCTAGTAAATGGTGCACAAAAGGGAGTAAATCCAGCGGTGGAATGCCTTTGAA  
 121 -----+-----+-----+-----+-----+ 180  
 E Q L V N G A Q K G V K S S G G N A F E -  
 ATCTCGCTCTACAACCTCTATGTACAAGATGGTGTGCTTCTAGCACAGATTTCAAGTAT  
 181 -----+-----+-----+-----+-----+ 240  
 I S L Y N S Y V Q D G A A S S T D F K Y -  
 GGTTTTATAGTGATAGCGTGGCAAAATTCAGCTTCTTGTGGAACAAGCTTACAATGTTT  
 241 -----+-----+-----+-----+-----+ 300  
 G F Y S D S V A K F S F L W N K L T M F -  
 GGTGAGGACAGCTCTCCTAACATGCAAACTTTGGTTTCACCTTCTCTCAAGAGATTGGT  
 301 -----+-----+-----+-----+-----+ 360  
 G E D S S P N M Q N F G F T F S Q E I G -  
 TATCGCTTCTTGCTAGGAAATCACAACGAGTGGTATATCACTCCACAAGGGCAAGTTGCT  
 361 -----+-----+-----+-----+-----+ 420  
 Y R F L L G N H N E W Y I T P Q G Q V A -  
 TTAGGTTATTTCAACCAAAGCAATATCAAGCAAACCCTAGGAAGCCACTGGCTAAAAGGC  
 421 -----+-----+-----+-----+-----+ 480  
 L G Y F N Q S N I K Q T L G S H W L K G -  
 GAGCAAAGTTCTATCTTCACAGTGCAGGGCGAATTGGAAGCAACTTTGGTTATAGATTT  
 481 -----+-----+-----+-----+-----+ 540  
 E Q S S I F T V Q G R I G S N F G Y R F -  
 AATCAATTCACTGAAGACAAGGGCTGGGCTTCAGAGCTTTATTTGGGCTTGTGGTACATC  
 541 -----+-----+-----+-----+-----+ 600  
 N Q F T E D K G W A S E L Y L G L W Y I -  
 GCGATTATATCAGTGGTGGCAATCTTACCCTCGTGTCTGACCTAGGTTCTGTAAACACT  
 601 -----+-----+-----+-----+-----+ 660  
 G D Y I S G G N L T L V S D L G S V N T -  
 TTAAGGACTTTGAGCTCTACTGGTAGATTTGCCTTTAACATTGGTACAAACTTCGTCGTC  
 661 -----+-----+-----+-----+-----+ 720  
 L R T L S S T G R F A F N I G T N F V V -  
 AAAGATAATCATAGATTCTACTTTGATTTTGAAAGAAGCTTTGGAGGCAAAATCATCACA  
 721 -----+-----+-----+-----+-----+ 780  
 K D N H R F Y F D F E R S F G G K I I T -  
 GATTACCAATTCAACATTGGCTATCGCTATAACTTTGGCGAAAACAGAAAATACGTTTCT  
 781 -----+-----+-----+-----+-----+ 840  
 D Y Q F N I G Y R Y N F G E N R K Y V S -  
 CTTCTGTCAGGTAGTATGAAAGACACTATCAAAAAGATGATAAGAAAGAAAACAAAGAA  
 841 -----+-----+-----+-----+-----+ 900  
 L L A G S M K D T I K K D D K K E N K E -  
 GAGACAGAAGAAATTGAG  
 901 -----+-----+-----+ 918  
 E T E E I E -

09/147036-147036

Figure 11

1 GAAACCACCATGTGGATTCTGACTGTTGGTGGACATAATGAGCATAATTTAGCTGATAGA 60  
 E T T M W I R T V G G H N E H N L A D R -  
 61 CAATTAAAAACACAGCTAACAGGATGGTTTATCAGATTGGTGGAGATATTTGAAGACA 120  
 Q L K T T A N R M V Y Q I G G D I L K T -  
 121 AACTTCACTGATCATGATGGCTTGCATGTGGGTATTATGGGAGCTTATGGATATCAGGAT 180  
 N F T D H D G L H V G I M G A Y G Y Q D -  
 181 AGCAAACTCATAATAAGTATACTAGTTATAGTTCACGAGGAAGTGTGAGCGGTTATACT 240  
 S K T H N K Y T S Y S S R G T V S G Y T -  
 241 GCCGGTTTGTACAGTTCTTGGTTTCAGGATGAAAAAGAACGAACAGGTCTATATATGGAT 300  
 A G L Y S S -W F Q D E K E R T G L Y M D -  
 301 GCTTGGTTGCAGTACAGTTGGTTTAATAATACAGTCAAAGGAGATGGGTTAACTGGTGAG 360  
 A W L Q Y S W F N N T V K G D G L T G E -  
 361 AAATATTCCAGCAAAGGAATAACAGGAGCTTTGGAAGCTGGCTATATCTACCCAACCATA 420  
 K Y S S K G I T G A L E A G Y I Y P T I -  
 421 CGCTGGACTGCTCATAATAATATTGACAACGCATTGTATCTCAATCCACAAGTCCAGATA 480  
 R W T A H N N I D N A L Y L N P Q V Q I -  
 481 ACTAGGCATGGGGTAAAAGCAAACGACTATATTGAACACAATGGCACTATGGTCACATCC 540  
 T R H G V K A N D Y I E H N G T M V T S -  
 541 TCTGGGGGCAATAATATTCAAGCAAATTTGGGATTGCGTACATCCTTAATTAGTCAGAGT 600  
 S G G N N I Q A K L G L R T S L I S Q S -  
 601 TGTATCGATAAGGAGACTCTTCGTAAGTTTCGAACCATTTTGGGAAGTGAATTGGAAATGG 660  
 C I D K E T L R K F E P F L E V N W K W -  
 661 AGCTCAAAGCAATATGGTGTAAATTATGAATGGCATGTCAAATCACCAGATAGGCAACCGT 720  
 S S K Q Y G V I M N G M S N H Q I G N R -  
 721 AATGTGATTGAACTCAAACTGGTGTGGGGGGCGTCTTGCAGATAACCTAAGCATCTGG 780  
 N V I E L K T G V G G R L A D N L S I W -  
 781 GGAAACGTATCTCAGCAATTGGGTAATAACAGTTACAGAGACACCCAAGGTATTTGGGT 840  
 G N V S Q Q L G N N S Y R D T Q G I L G -  
 841 GTGAAATATACCTTC 855  
 V K Y T F -

09/147036-12150

Figure 12

CTGGGCGAGTTGCGCCTGAATCCGGACGCCGGCGCGCCTGGGGCCGCGGCTTCGCGCAA  
 1 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 60  
 L G E L R L N P D A G G A W G R G F A Q -  
 CGCCAGCAGCTGGACAACCGCGCCGGGCGGCGCTTCGACCAGAAGGTGGCCGGCTTCGAG  
 61 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 120  
 R Q Q L D N R A G R R F D Q K V A G F E -  
 CTGGGCGCCGACCACGCGGTGGCGGTGGCCGGCGGACGCTGGCACCTGGGCGGGCTGGCC  
 121 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 180  
 L G A D H A V A V A G G R W H L G G L A -  
 GGCTATACGCGCGCGACCGCGGCTTCACCGCGGACGCGCGCGGCCACACCGACAGCGTG  
 181 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 240  
 G Y T R G D R G F T G D G G G H T D S V -  
 CATGTCGGGGGCTATGCCACATATATCGCCGACAGCGGTTTCTACCTGGACGCGACGCTG  
 241 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 300  
 H V G G Y A T Y I A D S G F Y L D A T L -  
 CGCGCCAGCCGCTGGAGAATGACTTCAAGGTGGCGGGCAGCGACGGGTACGCGGTCAAG  
 301 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 360  
 R A S R L E N D F K V A G S D G Y A V K -  
 GGCAAGTACCGCACCCATGGGGTGGGCGCCTCGCTCGAGGCGGGCCGGCGCTTTACCCAT  
 361 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 420  
 G K Y R T H G V G A S L E A G R R F T H -  
 GCCGACGGCTGGTTCTCTCGAGCCGACGGCCGAGCTGGCGGTATTCCGGGCGGGCGGCGGT  
 421 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 480  
 A D G W F L E P Q A E L A V F R A G G G -  
 GCGTACCGCGCGGCCAACGGCCTGCGGGTGC GCGACGAAGGCGGCAGCTCGGTGCTGGGT  
 481 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 540  
 A Y R A A N G L R V R D E G G S S V L G -  
 CGCCTGGGCGCTGGAGGTGCGCAAGCGCATCGAACTGGCAGGCGGCAGGCAGGTGCAGCCA  
 541 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 600  
 R L G L E V G K R I E L A G G R Q V Q P -  
 TACATCAAGGCCAGCGTGCTGCAGGAGTTTCGACGGCGCGGGTACGGTACACACCAACGGC  
 601 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 660  
 Y I K A S V L Q E F D G A G T V H T N G -  
 ATCGCGCACCAGCAACGAACTGCGCGGCACGCGCGCCGAACTGGGCCTGGGCATGGCCGCC  
 661 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 720  
 I A H R T E L R G T R A E L G L G M A A -  
 GCGCTGGGCGCGGCCACAGCCTGTATGCCTCGTACGAGTACTCCAAGGGCCCGAAGCTG  
 721 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 780  
 A L G R G H S L Y A S Y E Y S K G P K L -  
 GCCATGCCGTGGACCTTCCACGCGGGCTACCGGTACAGCTGG  
 781 -----+-----+-----+-----+-----+-----+-----+-----+-----+-----+ 822  
 A M P W T F H A G Y R Y S W -

09/147036-121598



Figure 13

CTGGGCGAGTTGCGCCTGAATCCGGACGCCGGCGGCGCTTGGGGCCGCGGCTTCGCGCAA  
 1 -----+-----+-----+-----+-----+ 60  
 L G E L R L N P D A G G A W G R G F A Q -  
 CGCCAGCAACTGGACAACCGCGCCGGGCGGCGCTTCGACCAGAAGGTGGCCGGCTTCGAG  
 61 -----+-----+-----+-----+-----+ 120  
 R Q Q L D N R A G R R F D Q K V A G F E -  
 CTGGGCGCCGACCACGCGGTGGCGGTGGCCGGCGGCGCTGGCACCTGGGCGGGCTGGCC  
 121 -----+-----+-----+-----+-----+ 180  
 L G A D H A V A V A G G R W H L G G L A -  
 GGCTATACGCGCGGCGACCGCGGCTTTACCGGCGACGGCGGCGGCCACACCGACAGCGTG  
 181 -----+-----+-----+-----+-----+ 240  
 G Y T R G D R G F T G D G G G H T D S V -  
 CATGTCGGGGGCTATGCCACCTATATCGCCAACAGCGGTTTCTACCTGGACGCGACGCTG  
 241 -----+-----+-----+-----+-----+ 300  
 H V G G Y A T Y I A N S G F Y L D A T L -  
 CGCGCCAGCCGCTCGAAAATGACTTCAAGGTGGCGGGCAGCGATGGGTACGCGGTCAAG  
 301 -----+-----+-----+-----+-----+ 360  
 R A S R L E N D F K V A G S D G Y A V K -  
 GGCAAGTACCGCACCCATGGGGTAGGCGTCTCGCTCGAGGCGGGCCGCGCTTCGCCCAT  
 361 -----+-----+-----+-----+-----+ 420  
 G K Y R T H G V G V S L E A G R R F A H -  
 GCCGACGGCTGGTTCTCGAGCCGCGAGCCGAGCTGGCGGTGTTCCGGGTCCGCGGCGGT  
 421 -----+-----+-----+-----+-----+ 480  
 A D G W F L E P Q A E L A V F R V G G G -  
 GCGTACCGCGCGGCAATGGCCTGCGGGTGC GCGACGAAGGCGGCAGCTCGGTGCTGGGT  
 481 -----+-----+-----+-----+-----+ 540  
 A Y R A A N G L R V R D E G G S S V L G -  
 CGCCTGGGCCTGGAGGTCCGCAAGCGCATCGAACTGGCAGGCGGCAGGCAGGTGCAGCCA  
 541 -----+-----+-----+-----+-----+ 600  
 R L G L E V G K R I E L A G G R Q V Q P -  
 TACATCAAGGCCAGCGTGTTCAGGAGTTCGACGGCGCGGTACGGTACGCACCAACGGC  
 601 -----+-----+-----+-----+-----+ 660  
 Y I K A S V L Q E F D G A G T V R T N G -  
 ATCGCGCATCGCACCGAACTGCGCGGCACGCGCGCCGAAGTGGGCCTGGGCATGGCCGCC  
 661 -----+-----+-----+-----+-----+ 720  
 I A H R T E L R G T R A E L G L G M A A -  
 GCGCTGGGCGCGGCCACAGCCTGTATGCCTCGTACGAGTACTCCAAGGGCCCCGAAGCTG  
 721 -----+-----+-----+-----+-----+ 780  
 A L G R G H S L Y A S Y E Y S K G P K L -  
 GCCATGCCGTGGACCTTCCACGCGGGCTACCGGTACAGCTGG  
 781 -----+-----+-----+-----+-----+ 822  
 A M P W T F H A G Y R Y S W -

Figure 14

AAGTTTGGTGCCTGGATAAGCCCGTTGTCGGTAATGCAACGCAGAAGATGTGTAACAGT  
 1 -----+-----+-----+-----+-----+ 60  
 K F G A W I S P F V G N A T Q K M C N S -  
 ATAAGTGGTTATAAGTCTGATACAACCTGGTGGCACTATAGGTTTTGACGGCTTCGTTAGC  
 61 -----+-----+-----+-----+-----+ 120  
 I S G Y K S D T T G G T I G F D G F V S -  
 GATGATCTAGCACTCGGACTTGCATATACAAGAGCCGATACTGACATTAAGCTAAAAAAT  
 121 -----+-----+-----+-----+-----+ 180  
 D D L A L G L A Y T R A D T D I K L K N -  
 AATAAACCGGCGATAAGAATAAGGTAGAGAGCAACATCTATTCTTTATACGGTTTATAT  
 181 -----+-----+-----+-----+-----+ 240  
 N K T G D K N K V E S N I Y S L Y G L Y -  
 AATGTACCTTATGAAAATCTCTTCGTTGAAGCTATAGCATCTTACTCAGATAATAAGATA  
 241 -----+-----+-----+-----+-----+ 300  
 N V P Y E N L F V E A I A S Y S D N K I -  
 AGAAGCAAATCAAGACGTTGTTATTGCAACGACACTAGAGACTGTCGGTTATCAAACCTGCA  
 301 -----+-----+-----+-----+-----+ 360  
 R S K S R R V I A T T L E T V G Y Q T A -  
 AACGGTAAGTATAAATCCGAAAGCTATACAGGTCAGTTAATGGCTGGTTATACCTATATG  
 361 -----+-----+-----+-----+-----+ 420  
 N G K Y K S E S Y T G Q L M A G Y T Y M -  
 ATGCCTGAGAACATTAACCTTAACACCGCTAGCTGGGCTTAGATATTCGACTATCAAAGAT  
 421 -----+-----+-----+-----+-----+ 480  
 M P E N I N L T P L A G L R Y S T I K D -  
 AAGGGCTATAAGGAAACCGGTACTACTTACCAAATCTTACCGTTAAAGGCAAGAACTAT  
 481 -----+-----+-----+-----+-----+ 540  
 K G Y K E T G T T Y Q N L T V K G K N Y -  
 AATACTTTTCGACGGTTTACTCGGTGCTAAAGTATCAAGTAATATCAATGTCAATGAAATA  
 541 -----+-----+-----+-----+-----+ 600  
 N T F D G L L G A K V S S N I N V N E I -  
 GTGCTAACACCTGAGCTTTACGCAATGGTCGATTATGCATTCAAGAATAAAGTTTCGGCG  
 601 -----+-----+-----+-----+-----+ 660  
 V L T P E L Y A M V D Y A F K N K V S A -  
 ATTGATGCAAGGTTACAAGGTATGACTGCTCCTCTTCCAACCAACAGCTTTAAGCAAAGC  
 661 -----+-----+-----+-----+-----+ 720  
 I D A R L Q G M T A P L P T N S F K Q S -  
 AAAACAAGTTTTGATGTCGGTGTGCGGTGTTACTGCTAAGCATAAAATGATGGAATACAGG  
 721 -----+-----+-----+-----+-----+ 780  
 K T S F D V G V G V T A K H K M M E Y R -  
 ATTAACCTACGATACCAATATCGGAAGTAAGTATTTTCGCTCAGCAAGGTAGTGTAAGTT  
 781 -----+-----+-----+-----+-----+ 840  
 I N Y D T N I G S K Y F A Q Q G S V K V -  
 CGTGTTAATTTT  
 841 -----+-----+ 852  
 R V N F -

09/147036 12590

Figure 15

TCTTATGGTGTATGGGCTAAACCTTTCTATAACATTGCAGAACAAGACAAAAAAGGTGGT  
 1 -----+-----+-----+-----+ 60  
 S Y G V W A K P F Y N I A E Q D K K G G -  
 ATAGCTGGTTATAAAGCAAAACTACTGGGGTTGTAGTTGGTTTAGATACTCTCGCTAGC  
 61 -----+-----+-----+-----+ 120  
 I A G Y K A K T T G V V V G L D T L A S -  
 GATAACCTAATGATTGGGGCAGCTATTGGGATCACTAAAACTGATATAAAACACCAAGAT  
 121 -----+-----+-----+-----+ 180  
 D N L M I G A A I G I T K T D I K H Q D -  
 TATAAGAAAGGTGATAAACTGATATTAATGGTTTATCATTCTCTCTATATGGTTCCCAA  
 181 -----+-----+-----+-----+ 240  
 Y K K G D K T D I N G L S F S L Y G S Q -  
 CAGCTTGTTAAGAATTTCTTTGCTCAAGGTAATTCAATCTTTACCTTAAACAAAGTCAAA  
 241 -----+-----+-----+-----+ 300  
 Q L V K N F F A Q G N S I F T L N K V K -  
 AGTAAAGTCAGCGTTACTTCTTCGAGTCTAATGGTAAGATGAGCAAGCAAATTGCTGCT  
 301 -----+-----+-----+-----+ 360  
 S K S Q R Y F F E S N G K M S K Q I A A -  
 GGTAATTACGATAACATGACATTTGGTGGTAATTTAATATTTGGTTATGATTATAATGCA  
 361 -----+-----+-----+-----+ 420  
 G N Y D N M T F G G N L I F G Y D Y N A -  
 ATGCCAAATGTATTAGTAACTCCAATGGCAGGACTTAGCTACTTAAATCTTCTAATGAA  
 421 -----+-----+-----+-----+ 480  
 M P N V L V T P M A G L S Y L K S S N E -  
 AATTATAAAGAAACCGGTACAACAGTTGCAAATAAGCGCATTAAATAGCAAATTTAGTGAT  
 481 -----+-----+-----+-----+ 540  
 N Y K E T G T T V A N K R I N S K F S D -  
 AGAGTCGATTTAATAGTAGGGGCTAAAGTAGCTGGTAGTACTGTGAATATAACTGATATT  
 541 -----+-----+-----+-----+ 600  
 R V D L I V G A K V A G S T V N I T D I -  
 GTGATATATCCGGAATTCATTCTTTTGTGGTGCACAAAGTAAATGGTAAATTATCTAAC  
 601 -----+-----+-----+-----+ 660  
 V I Y P E I H S F V V H K V N G K L S N -  
 TCTCAGTCTATGTTAGATGGACAACTGCTCCATTTATCAGTCAACCTGATAGAAGTGGT  
 661 -----+-----+-----+-----+ 720  
 S Q S M L D G Q T A P F I S Q P D R T A -  
 AAAACGTCTTATAATATAGGCTTAAGTGCAAACATAAAATCTGATGCTAAGATGGAGTAT  
 721 -----+-----+-----+-----+ 780  
 K T S Y N I G L S A N I K S D A K M E Y -  
 GGTATCGGTTATGATTTTAATTCTGCAAGTAAATATACTGCACATCAAGGTACTTTAAAA  
 781 -----+-----+-----+-----+ 840  
 G I G Y D F N S A S K Y T A H Q G T L K -  
 GTACGTGTAAACTTC  
 841 -----+-----+-----+ 855  
 V R V N F -

09/147036 19/28

Figure 16

1 GCTTACGGTATATGGGCAAACCTTTCTATACTGATGCACATCAAAGTAAGAAAGGTGGT 60  
 A Y G I W A K P F Y T D A H Q S K K G G -  
 61 TTAGCTGGTTATAAAGCTAAAACCACCGGTGTCGTAATCGGTTTAGATACGCTAGCTAAC 120  
 L A G Y K A K T T G V V I G L D T L A N -  
 121 GATAATTTAATGATCGGTGCTGCTATCGGTATCACTAAAAC TGATATAAAACATCAAGAT 180  
 D N L M I G A A I G I T K T D I K H Q D -  
 181 TATAAGAAAGGTGATAAAACCGACGTTAACGGTTTCTCATTCTCTCTATATGGTGCCAG 240  
 Y K K G D K T D V N G F S F S L Y G A Q -  
 241 CAGCTTGTTAAGAACTTCTTTGCTCAAGGTAGTGCAATATTTAGCTTAAACCAAGTGAAG 300  
 Q L V K N F F A Q G S A I F S L N Q V K -  
 301 AACAAAAGTCAGCGTTACTTCTTCGATGCTAACGGTAATATGAGCAAGCAAATTGCTGCC 360  
 N K S Q R Y F F D A N G N M S K Q I A A -  
 361 GGTCATTACGATAACATGACATTTGGTGGTAACTTAACAGTCGGTTATGATTACAATGCA 420  
 G H Y D N M T F G G N L T V G Y D Y N A -  
 421 ATGCAAGGTGTGTTAGTAACCTCCAATGGCAGGACTTAGCTACTTAAAGTCTTCTGACGAA 480  
 M Q G V L V T P M A G L S Y L K S S D E -  
 481 AACTACAAAGAAACCGGTACAACAGTTGCAACAAGCAAGTTAACAGCAAATTTAGCGAT 540  
 N Y K E T G T T V A N K Q V N S K F S D -  
 541 AGAACCGATTTAATAGTAGGTGCTAAAGTAGCCGGCAGTACTATGAACATACTGATCTT 600  
 R T D L I V G A K V A G S T M N I T D L -  
 601 GCGGTATATCCAGAAGTTCACGCTTTTGTGGTTCACAAAGTAACCGGTAGATTATCTAAA 660  
 A V Y P E V H A F V V H K V T G R L S K -  
 661 ACTCAGTCTGTATTAGACGGACAAGTTACTCCGTGTATCAACCAGCCTGACAGAACCACT 720  
 T Q S V L D G Q V T P C I N Q P D R T T -  
 721 AAAACATCTTATAATTTAGGTTTAAAGTGAAGCATAAGATCTGATGCTAAGATGGAGTAC 780  
 K T S Y N L G L S A S I R S D A K M E Y -  
 781 GGAATCGGTTACGATGCTCAGATTTCAAGTAAATATACTGCACATCAAGGTACTCTAAAA 840  
 G I G Y D A Q I S S K Y T A H Q G T L K -  
 841 GTCCGTGTAAACTTC 855  
 V R V N F -

Figure 17

TCTTATGGTGTATGGGCTAAACCTTTCTATAACATCGCAGAACAAGATAAAAAAGGTGGT  
 1 S Y G V W A K P F Y N I A E Q D K K G G 60  
 CTAGCTGGTTATAAAGCAAAAAGTCTGGTGTGTAGTTGGTTTAGATACTCTCGCTAAT  
 61 L A G Y K A K T A G V V V G L D T L A N 120  
 GATAACCTAATGATTGGTGCAGCTATTGGTATCACTAAAGTACATAAAACACCAAGAT  
 121 D N L M I G A A I G I T K T D I K H Q D 180  
 TATAAAAAAGGTGATAAAAGTATTAAGGGTTTATCCTTCTCTCTATATGGTGCCAG  
 181 Y K K G D K T D I K G L S F S L Y G A Q 240  
 CAGCTTGTTAAGAATTTCTTTGCTCAAGGTAGTGCAATATTTACCTTAAACAAAGTCAAA  
 241 Q L V K N F F A Q G S A I F T L N K V K 300  
 AGTAAAGTCAGCGTTACTTCTTCGATGCTAATGGTAAGATGAACAAGCAAATTGCTGCC  
 301 S K S Q R Y F F D A N G K M N K Q I A A 360  
 GGTAATTATGATAACATAACATTCGGTGGTAATTTAATGTTTGGTTATGATTATAATGCA  
 361 G N Y D N I T F G G N L M F G Y D Y N A 420  
 CTGCAAGGTGTATTAGTGACTCCAATGGCAGGGCTTAGCTACTTAAATCTTCTAATGAA  
 421 L Q G V L V T P M A G L S Y L K S S N E 480  
 AACTATAAAGAACTGGTACTACAGTTGCAAATAAGCGCATTACAGCAAATTTAGTGAT  
 481 N Y K E T G T T V A N K R I H S K F S D 540  
 AGAATCGATTTAATAGTAGGTGCTAAAGTAACTGGTAGTGCTATGAATATAAATGATATT  
 541 R I D L I V G A K V T G S A M N I N D I 600  
 GTGATATATCCAGAAATTCATTCTTTGTAGTGCACAAAGTAAATGGTAAGCTATCTAAG  
 601 V I Y P E I H S F V V H K V N G K L S K 660  
 GCTCAGTCTATGTTAGATGGACAAAGTCTCCATTTATCAGTCAGCCTGATAGAAGTCT  
 661 A Q S M L D G Q T A P F I S Q P D R T A 720  
 AAAACATCTTATAATATAGGCTTAAGTGCAAATATAAGATCTGATGCTAAGATGGAGTAT  
 721 K T S Y N I G L S A N I R S D A K M E Y 780  
 GGTATCGGTTATGATTTTAATGCTGCAAGTAAATATACTGCACATCAAGGTACTTTAAAA  
 781 G I G Y D F N A A S K Y T A H Q G T L K 840  
 GTACGTATAAATTC  
 841 V R I N F 855

09/147036.1598

Figure 18

1 CAGGGGGATGCCCGGTGTCTGGGCACGCATAATGAATGGTACCGGTTCCGGCAGATGGTGAC 60  
 Q G D A G V W A R I M N G T G S A D G D -  
 61 TACAGCGATAACTACACTCACGTTTCAGATTGGTGTCTGACAGAAAGCATGAGCTGGACGGT 120  
 Y S D N Y T H V Q I G V D R K H E L D G -  
 121 GTGGATTATTATTACGGGGGCATTGCTGACCTATACGGACAGCAATGCAAGCAGCCACGCA 180  
 V D L F T G A L L T Y T D S N A S S H A -  
 181 TTCAGTGGAAAAAACAATCCGTGGGTGGCGGTCTGTATGCCTCTGCACTCTTTAATTCC 240  
 F S G K N K S V G G G L Y A S A L F N S -  
 241 GGAGCTTATTTTGACCTGATTGGTAAATATCTCCATCATGATAATCAGCACACGGCGAAT 300  
 G A Y F D L I G K Y L H H D N Q H T A N -  
 301 TTTGCCTCACTGGGAACAAAAGACTACAGCTCTCATTCCTGGTATGCCGGTGTCTGAAGTT 360  
 F A S L G T K D Y S S H S W Y A G A E V -  
 361 GGTTATCGTTACCACCTGACGAAAGAGTCCTGGGTGGAGCCACAGATAGAGCTGGTTTAC 420  
 G Y R Y H L T K E S W V E P Q I E L V Y -  
 421 GGTTCTGTATCAGGAAAAGCTTTTAGCTGGGAAGCCCGGGGAATGGCTCTGAGCATGAAA 480  
 G S V S G K A F S W E A R G M A L S M K -  
 481 GACAAGGATTATAACCCACTGATTGGCCGTACTGGTGTGACGTGGGAAGAGCCTTCTCC 540  
 D K D Y N P L I G R T G V D V G R A F S -  
 541 GGAGACGACTGGAAAATCACAGCTCGAGCCGGGCTGGGTTATCAGTTCGACCTGCTGGCG 600  
 G D D W K I T A R A G L G Y Q F D L L A -  
 601 AACGGAGAAACGGTTCTGCAGGATGCTTCCGGAGAGAAACGTTTCGAAGGTGAAAAAGAT 660  
 N G E T V L Q D A S G E K R F E G E K D -  
 661 AGCAGGATGCTGATGACGGTAGGGATGAATGCGGAAATTAAGGATAATATGCGTTTGGGA 720  
 S R M L M T V G M N A E I K D N M R L G -  
 721 CTGGAGCTGGAGAAATCAGCGTTCCGGAAATATAATGTGGATAATGCGATAAACGCCAAC 780  
 L E L E K S A F G K Y N V D N A I N A N -  
 781 TTCCGTTATGTTTTTC 795  
 F R Y V F -

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Figure 19

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1  ACCCGTCAACTGTCCGGCCAGATCCACGCGGATATGGCGTCCGCCCAGATTAACGAAAGC 60
   T R Q L S G Q I H A D M A S A Q I N E S -
61  CGTTATCTGCGCGATACCGCCACCGAGCGGTTGCGCCAGGCCGATGGCCGCCGCACCGCT 120
   R Y L R D T A T E R L R Q A D G R R T A -
121 TCCGATATCAAAGCGGATGATAATGGCGCCTGGGCGAAATTGCTGGGCAACTGGGGGCAT 180
   S D I K A D D N G A W A K L L G N W G H -
181 GCTTCCGGCAACGACAACGCTACCGGTTACCAGACATCCACCTATGGCGTGCTGTTGGGT 240
   A S G N D N A T G Y Q T S T Y G V L L G -
241 CTGGACAGCGAACTGTTTGACGACGGCCGGCTGGGCGTGATGACCGGGTATACCCGCACG 300
   L D S E L F D D G R L G V M T G Y T R T -
301 TCGCTGGTAGGCGGTCTACAGTCAGTAGTCCACAGCGACACTACACATCTGGGGCTGTAC 360
   S L V G G L Q S V V H S D T T H L G L Y -
361 GGCGACAAACGCTTCGGCGCGTTGGCGCTGCCAGCGGGCGGCACCTATACCTGGCATCGC 420
   G D K R F G A L A L P A G G T Y T W H R -
421 ATCGACACGTCGCGCTCGGTAAACTACGGCGCGCAGGCGGATCGCGAAAAGGCCCGCTAT 480
   I D T S R S V N Y G A Q A D R E K A R Y -
481 AACGCGCGCACCGGTCAGCTGTTTATCGAAAGCGGCTACGATTGGAGCAACGACGTGGTC 540
   N A R T G Q L F I E S G Y D W S N D V V -
541 AATCTTGAGCCGTTCCGCCAACCTGGCGTACACCCACTATCGCAACGAGGGGATCAACGAG 600
   N L E P F A N L A Y T H Y R N E G I N E -
601 CAAGGCGGGGCGGCGGCGCTGCGCGGCGATAAGCAAAGTCAGTCCGCCACCGCTTCGACG 660
   Q G G A A A L R G D K Q S Q S A T A S T -
661 CTGGGCCTGCGCGCCGATACGCAATGGCAGACCGACAGCGTGGCGATCGCCCTGCCGGGC 720
   L G L R A D T Q W Q T D S V A I A L P G -
721 GAGCTGGGTTGGCAACATCAGTACGGCAAGCTGGAGCGTAAACACAGCTGATGTTCAAA 780
   E L G W Q H Q Y G K L E R K T Q L M F K -
781 CGCAGCGATGTGCGGTTTCGACGTGAACAGCGTCCCTGTTTCTCGCGATGGGGCCATTCTG 840
   R S D V A F D V N S V P V S R D G A I L -
841 AAAGCGGGCGTCGATGTATCGATTAACAAAAACGTCGTCTCTGTCCTTGGGTACGGCGGG 900
   K A G V D V S I N K N V V L S L G Y G G -
901 CAGCTGTCGTCCAACCACCAGGACAACAGCGTCAACGCCGGCCTGACCTGGCGGTTTC 957
   Q L S S N H Q D N S V N A G L T W R F

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Figure 20

ACCCGTCAACTGTCCGGCCAGATCCACGCGGATATGGCTTCCGCCCAGATCAACGAAAGC  
 1 T R Q L S G Q I H A D M A S A Q I N E S 60  
 CGTTACCTGCGCGATACCGCCACCGAGCGCTTGGCGCCAGGCGGAAGGCCGCGCACCCT  
 61 R Y L R D T A T E R L R Q A E G R R T A 120  
 ACCGACATTAAAGCGGATGACAACGGCGCCTGGGCGAAACTGCTGGGTAGCTGGGGGCAT  
 121 T D I K A D D N G A W A K L L G S W G H 180  
 GCTTCCGGCAACGACAACGCCACCGTTACCAGACCTCCACCTATGGCGTGCTGTAGGT  
 181 A S G N D N A T G Y Q T S T Y G V L L G 240  
 CTGGACAGCGAACTGTTTGGCGACGGCCGGCTTGGCATGATGACCGGGTATACCCGCACT  
 241 L D S E L F G D G R L G M M T G Y T R T 300  
 TCGCTGGATGGAGGTTATCAGTCAGATGCTCACAGCGACAACCTACCATCTGGGGCTGTAC  
 301 S L D G G Y Q S D A H S D N Y H L G L Y 360  
 GGCGACAAACGCTTCGGCGCGTTGGCGCTGCGAGCGGGCGGCACCTATACCTGGCATCGC  
 361 G D K R F G A L A L R A G G T Y T W H R 420  
 ATCGACACCTCGCGTTCGGTGAACCTACGGCGCGCAGTCGGATCGCGAGAAGGCCAAGTAT  
 421 I D T S R S V N Y G A Q S D R E K A K Y 480  
 AACGCGCGCACCGGTCAGCTGTTTCATCGAAAGCGGCTACGATTGGACGAGCGATGCGGTC  
 481 N A R T G Q L F I E S G Y D W T S D A V 540  
 AACCTTGAGCCGTTCCGCCAACCTGGCGTATACCCATTACCGTAACGAGGAGATCAACGAG  
 541 N L E P F A N L A Y T H Y R N E E I N E 600  
 CAAGGCGGGGCAGCGCGCTGCGCGGCGACAAACAAAGTCAGTCCGCCACCGCCTCGACG  
 601 Q G G A A A L R G D K Q S Q S A T A S T 660  
 TTGGGTCTGCGCGCCGACACCGAGTGGCAAACCGACAGCGTGGCGATCGCGCTGCGCGGC  
 661 L G L R A D T E W Q T D S V A I A L R G 720  
 GAGCTGGGTGGCAGCATCAGTACGGCAAGCTGGAGCGTAAAACGCAGCTGATGTTCAAA  
 721 E L G W Q H Q Y G K L E R K T Q L M F K 780  
 CGCACTGATGCGGCGTTTCGACGTGAACAGCGTGCCTGTTTCTCGCGATGGCGCGATTCTG  
 781 R T D A A F D V N S V P V S R D G A I L 840  
 AAAGCGGGCGTCGATGTATCGATTAACAAAAACGCCGTCCTGTCCCTTGGCTACGGCGGG  
 841 K A G V D V S I N K N A V L S L G Y G G 900  
 CAGCTGTCGTCCAACCACGAGACAACAGCGTCAACGCCGGTCTGACCTGGCGCTTC  
 901 Q L S S N H Q D N S V N A G L T W R F 957

09/147036 "12555" 09/147036



Figure 21

1 TTCCGTCAGCTGTCGGGGCAAATCCATGCGGACATCGCGTCGGCGCTGGTGAACGACAGC 60  
 F R Q L S G Q I H A D I A S A L V N D S -  
 61 CGCTACCTGCGTGAGGCGCTGAACGGGCGTCTGCGTCAGGCGGAAGGGCTGGCGAGCTCG 120  
 R Y L R E A L N G R L R Q A E G L A S S -  
 121 TCGGCCATCAAGGCGGACGAGGACGGCGCCTGGGCGCAGCTGCTGGGAGCGTGGGACCAT 180  
 S A I K A D E D G A W A Q L L G A W D H -  
 181 GCGTCGGGCGACGCCAACGCCACCGGCTATCAGGCCTCGACCTACGGGTGCTGGTGGGG 240  
 A S G D A N A T G Y Q A S T Y G V L V G -  
 241 CTGGACTCGGCGGCGGCGCCGACTGGCGGCTGGGGGTGGCGACCGGCTACACCCGCACC 300  
 L D S A A A A D W R L G V A T G Y T R T -  
 301 TCGCTGCACGGCGGGTATGGGTGCAAGGCGGACAGCGACAACCTACCACCTGGCGGCGTAC 360  
 S L H G G Y G S K A D S D N Y H L A A Y -  
 361 GCGACAAGCAGTTGCGGGCGCTGGCGCTGCGGGCGGGCGGGCTACACCTGGCACCGC 420  
 G D K Q F G A L A L R G G A G Y T W H R -  
 421 ATCGACACCAAGCGGTGCGTGAACCTACGGGATGCAGTCGGACCGCGACACGGCGAAGTAC 480  
 I D T K R S V N Y G M Q S D R D T A K Y -  
 481 AGCGCGCGCACCGAGCAGCTGTTGCGGAAGCGGGCTACAGCGTGAAGGGCGAGTGGCTG 540  
 S A R T E Q L F A E A G Y S V K G E W L -  
 541 AACCTGGAGCCGTTGCTCAACCTGGCGTACGTGAACTTTGAAAACAACGGCATCGCGGAA 600  
 N L E P F V N L A Y V N F E N N G I A E -  
 601 AGCGGCGGCGCAGCGGCGCTGCGCGGCGACAAGCAGCACACCGACGCGACGGTGTGACG 660  
 S G G A A A L R G D K Q H T D A T V S T -  
 661 CTGGGACTGCGCGCGGACACTGAGTGGCAGGTGAGCCCGGGCACGACGGTGGCGCTGCGC 720  
 L G L R A D T E W Q V S P G T T V A L R -  
 721 AGCGAGCTGGGGTGGCAACACCAGTACGGCGGGCTGGAGCGTGGCACCGGGCTGCGGTTC 780  
 S E L G W Q H Q Y G G L E R G T G L R F -  
 781 AACGGCGGCAACCGCGCGTTGCTGGTGGACAGCGTGCCGGTGTGCGCGACGGGATGGTG 840  
 N G G N A P F V V D S V P V S R D G M V -  
 841 CTGAAGGCGGGTGGCGAAGTGGCGGTGAACGAGAACGCCTCGCTGTCGCTGGGCTACGGC 900  
 L K A G A E V A V N E N A S L S L G Y G -  
 901 GGGCTGCTGTGCGAGAACCATCAGGACAACAGCGTCAACGCCGGCTTACCTGGCGCTTC 960  
 G L L S Q N H Q D N S V N A G F T W R F -

09/147036

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1 TTCCGTCAGCTGTCGGGGCAAATCCATGCGGACATCGCGTTCGGCGCTGGTGAACGACAGC 60  
F R Q L S G Q I H A D I A S A L V N D S -

61 CGCTACCTGCGTGAGGCGCTGAACGGGCGTCTGCGTCAGGCGGAAGGGCTGGCGAGCTCG 120  
R Y L R E A L N G R L R Q A E G L A S S -

121 TCGGCCATCAAGCGGACGAGGACGGCGCCTGGGCGCAGCTGCTGGGAGCGTGGGACCAT 180  
S A I K A D E D G A W A Q L L G A W D H -

181 GCGTCGGGCGACGCCAACGCCACCGGCTATCAGGCCTCGACCTACGGGGTGCTGGTGGGG 240  
A S G D A N A T G Y Q A S T Y G V L V G -

241 CTGGA CTGCGCGCGCGCGGCGGCTGGCGGCTGGGGGTGGCGACCGGCTACACCCGCACC 300  
L D S A A A A D W R L G V A T G Y T R T -

301 TCGCTGCACGGCGGGTATGGGTGCAAGGCGGACAGCGACA ACTACACCTGGCGGCGTAC 360  
S L H G G Y G S K A D S D N Y H L A A Y -

361 GCGGACAAGCAGTTCGGGGCGCTGGCGCTGCGGGGCGGGGCGGGCTACACCTGGCACCGC 420  
G D K Q F G A L A L R G G A G Y T W H R -

421 ATCGACACCAAGCGGTTCGGTGA ACTACGGGATGCAGTCGGACCGCGACACGGCGAAGTAC 480  
I D T K R S V N Y G M Q S D R D T A K Y -

481 AGCGCGCGCACCGAGCAGCTGTTTCGCGGAAGCGGGCTACAGCGTGAAGGGCGAGTGGCTG 540  
S A R T E Q L F A E A G Y S V K G E W L -

541 AACCTGGAGCCGTTTCGTCAACCTGGCGTACGTGA ACTTTGAAAACAACGGCATCGCGGAA 600  
N L E P F V N L A Y V N F E N N G I A E -

601 AGCGGCGGCGCAGCGGCGCTGCGCGGCGACAAGCAGCACACCGACGCGACGGTGTTCGACG 660  
S G G A A A L R G D K Q H T D A T V S T -

661 CTGGGACTGCGCGCGGACACTGAGTGGCAGGTGAGCCCCGGGCACGACGGTGGCGCTGCGC 720  
L G L R A D T E W Q V S P G T T V A L R -

721 AGCGAGCTGGGGTGGCAACACCACTACGGCGGGCTGGAGCGTGGCACCGGGCTGCGGTTC 780  
S E L G W Q H Q Y G G L E R G T G L R F -

781 AACGGCGGCAACGCGCCGTTTCGTGGTGGACAGCGTGCCGGTGTGCGCGACGGGATGGTG 840  
N G G N A P F V V D S V P V S R D G M V -

841 CTGAAGGCGGGTGCGGAAGTGGCGGTGAACGAGAACGCCTCGCTGTCGCTGGGCTACGGC 900  
L K A G A E V A V N E N A S L S L G Y G -

901 GGGCTGCTGTGCGAGAACCATCAGGACAACAGCGTCAACGCCGGCTTCACCTGGCGCTTC 960  
G L L S Q N H Q D N S V N A G F T W R F -

Figure 23

ATTAATGGCGAAGCCGGTACGTGGGTGCGTCTGCTGAACGGTTCCGGCTCTGCTGATGGC  
1 -----+-----+-----+-----+-----+ 60  
I N G E A G T W V R L L N G S G S A D G -  
GGTTTCACTGACCACTATACCCTGCTGCAGATGGGGGCTGACCGTAAGCACGAAC TGGGA  
61 -----+-----+-----+-----+-----+ 120  
G F T D H Y T L L Q M G A D R K H E L G -  
AGTATGGACCTGTTTACCGGCGTGATGGCCACCTACACTGACACAGATGCGTCAGCAGAC  
121 -----+-----+-----+-----+-----+ 180  
S M D L F T G V M A T Y T D T D A S A D -  
CTGTACAGCGGTAAAACAAAATCATGGGGTGGTGGTTTCTATGCCAGTGGTCTGTTCCGG  
181 -----+-----+-----+-----+-----+ 240  
L Y S G K T K S W G G G F Y A S G L F R -  
TCCGGCGCTTACTTTGATGTGATTGCCAAATATATTCACAATGAAAACAAATATGACCTG  
241 -----+-----+-----+-----+-----+ 300  
S G A Y F D V I A K Y I H N E N K Y D L -  
AACTTTGCCGGAGCTGGTAAACAGAACTTCCGCAGCCATTCACTGTATGCAGGTGCAGAA  
301 -----+-----+-----+-----+-----+ 360  
N F A G A G K Q N F R S H S L Y A G A E -  
GTCGGATACCGTTATCATCTGACAGATACGACGTTTGTGAACCTCAGGCGGAAC TGGTC  
361 -----+-----+-----+-----+-----+ 420  
V G Y R Y H L T D T T F V E P Q A E L V -  
TGGGGAAGACTGCAGGGCCAAACATTTAACTGGAACGACAGTGAATGGATGTCTCAATG  
421 -----+-----+-----+-----+-----+ 480  
W G R L Q G Q T F N W N D S G M D V S M -  
CGTCGTAACAGCGTTAATCCTCTGGTAGGCAGAACCGGCGTTGTTTCCGGTAAAACCTTC  
481 -----+-----+-----+-----+-----+ 540  
R R N S V N P L V G R T G V V S G K T F -  
AGTGGTAAGGACTGGAGTCTGACAGCCCGTGCCGGCCTGCATTATGAGTTGATCTGACG  
541 -----+-----+-----+-----+-----+ 600  
S G K D W S L T A R A G L H Y E F D L T -  
GACAGTGCTGACGTTTCATCTGAAGGATGCAGCGGGAGAACATCAGATTAATGGCAGAAAA  
601 -----+-----+-----+-----+-----+ 660  
D S A D V H L K D A A G E H Q I N G R K -  
GACAGTCGTATGCTTTACGGTGTGGGGTTAAATGCCCGGTTTGGCGACAATACGCGTTTG  
661 -----+-----+-----+-----+-----+ 720  
D S R M L Y G V G L N A R F G D N T R L -  
GGGCTGGAAGTTGAACGCTCTGCATTGTTGTAATAACAACACAGATGATGCGATAAACGCT  
721 -----+-----+-----+-----+-----+ 780  
G L E V E R S A F G K Y N T D D A I N A -  
AATATTCGTTATTCATTC  
781 -----+-----+-----+-----+-----+ 798  
N I R Y S F -

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[illegible]

1 TCTTTAGAAAGCGCGGCGGAAGTGTGTATCAATTTGCCCTAAATATGAAAAACCCACC 60  
S L E S A A E V L Y Q F A P K Y E K P T -  
61 AATGTTTGCCTAACGCTATTGGGGGAACGAGCTTGAATAGTGGCGGTAACGCTTCATTG 120  
N V W A N A I G G T S L N S G G N A S L -  
121 TATGGCACAAGTGCGGGCGTAGATGCTTACCTTAACGGGGAAGTGGGAAGCCATTGTGGGC 180  
Y G T S A G V D A Y L N G E V E A I V G -  
181 GGTTTTGAAGCTATGGTTATAGCTCCTTTAGTAATCAAGCGAACTCTCTTAACCTCTGGG 240  
G F G S Y G Y S S F S N Q A N S L N S G -  
241 GCCAATAACACTAATTTTGGCGTGTATAGCCGTATTTTGGCTAACCCAGCATGAATTTGAC 300  
A N N T N F G V Y S R I F A N Q H E F D -  
301 TTTGAAGCTCAAGGGGCGCTAGGGAGTGATCAATCAAGCTTGAATTTCAAAGCGCTTTA 360  
F E A Q G A L G S D Q S S L N F K S A L -  
361 TTGCGAGATTGAATCAAAGCTATAATTACTTAGCCTATAGCGCTGCAACAAGAGCGAGC 420  
L R D L N Q S Y N Y L A Y S A A T R A S -  
421 TATGGTTATGACTTCGCGTTTTTTAGGAACGCTTTGGTGTAAAACCAAGCGTGGGCGTG 480  
Y G Y D F A F F R N A L V L K P S V G V -  
481 AGCTATAACCATTTAGGTTCAACCAACTTTAAAAGCAACAGCAATCAAAAAGTGGCTTTG 540  
S Y N H L G S T N F K S N S N Q K V A L -  
541 AAAAATGGTGCAAGCAGTCAGCATTTATTCAACGCTAGTGCTAATGTGGAAGCGCGCTAT 600  
K N G A S S Q H L F N A S A N V E A R Y -  
601 TATTATGGGGACACTTCATACTTCTACATGAACGCTGGAGTTTTACAAGAGTTTCGCTAAC 660  
Y Y G D T S Y F Y M N A G V L Q E F A N -  
661 TTTGGTTCTAGCAATGCGGTGTCTTTAAACACCTTTAAAGTGAATGCTACTCGTAACCCT 720  
F G S S N A V S L N T F K V N A T R N P -  
721 TTAAATACCCATGCGAGAGTGATGATGGGTGGGGAATTAAATTAGCTAAAGAAGTGTTT 780  
L N T H A R V M M G G E L K L A K E V F -  
781 TTGAATTTGGGCTTTGTTTATTGTCACAATTTGATTTCCAATATAGGCCATTTTCGCTTCC 840  
L N L G F V Y L H N L I S N I G H F A S -  
841 AATTTAGGAATGAGGTATAGTTTC 864  
N L G M R Y S F -